

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.
42-R-0003

CUSTOMER NO.
1575

FORM APPROVED
OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

IOWA STATE UNIVERSITY
1138 PEARSON HALL
ATTN: (b)(6), (b)(7)(c)
AMES, IA 50011
(b)(6), (b)(7)(c)

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS (sites)

See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquillizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs	108	175	572	0	747
5. Cats	2	115	164	0	279
6. Guinea Pigs	0	14	0	0	14
7. Hamsters	0	36	24	1	61
8. Rabbits	0	30	52	0	82
9. Non-Human Primates	0	0	0	0	0
10. Sheep	0	93	34	0	127
11. Pigs	0	28	13	0	41
12. Cattle	0	1	7	0	8
Other Farm Animals					
Horses	0	6	6	0	12
13. Other Animals					
Goats	0	0	12	0	12
Chinchilla	0	2	0	0	2
Chipmunk	0	0	30	7	37

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

NOV 30 2006

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIC	(b)(6), (b)(7)(c)	NAME AND TITLE OF CHIEF EXECUTIVE OFFICER OR INSTITUTIONAL OFFICIAL (Type or Print)	DATE SIGNED
API	(b)(6), (b)(7)(c)	(b)(6), (b)(7)(c)	11/29/06

(488), which is obsolete

PART 1 - HEADQUARTERS

FORM APPROVED
OMB NO. 0579-0036

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

[illegible]

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all the exceptions is attached to this annual report.** In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

NOV 30 2006

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

DATE SIGNED

(b)(6),(b)(7)(c)

11/29/06

HEADQUARTERS

Column E Explanation

1. Registration Number – 42-R-0003
2. Species used in this study – Hamsters
3. Total number of animals used in the study – 24
4. Number of Column E animals used in the study - 1
5. Explanation of the study:

The hamsters were involved in a study designed to determine whether West Nile Virus (WNV) antibodies produced in geese would be protective against WNV infection in a mammalian model exposed to the virus. In this study all animals were exposed to WNV by intraperitoneal injection. The control animals (those not receiving antibodies) were expected to show clinical signs. The plan for management of potential pain and distress was to euthanize (using a method approved by the AVMA Panel on Euthanasia) affected animals as soon as clinical signs were noted. However, we found that the disease progressed very quickly and the hamster reported in category E was found dead before clinical signs were noted.

6. Justification for not using anesthetics and analgesics:

A search of literature (1965 through 2005), conducted in May, 2005, was used to determine that the use of analgesics could interfere with the study. Key words used included: virus infection and anesthetics, virus infection and analgesics, analgesics and liver detoxification, analgesics and flaviviruses, analgesics and Japanese encephalitis virus, analgesics and St. Louis virus, aspirin and virus infection, antipyretics and virus infection, aspirin and influenza virus.

Anesthetics and analgesics could not be used in this study because there is evidence that these drugs would impact the data collected and negate the studies by:

1) interfering with the development of viremia (Analgesics such as the oxycam group are antipyretic. Use of these drugs would interfere with the development of viremia, compromising the attempt to mimic that which occurs under natural conditions.)

2) enhancing the pathogenic effect of a virus infection (Sunden et al. J Vet Med Sci 2003:1185-8)

3) interfering with virus replication (Liao et al J. Virol 2001:7828-39)

NOV 30 2006

Column E Explanation

1. Registration Number – 42-R-0003

2. Species used in this study – chipmunks, tree squirrels, field mice, raccoons

3. Total number of animals used in the study;

Chipmunks – 37
Tree squirrels - 32
Field mice – 288
Raccoons - 7

4. Number of Column E animals used in the study

Chipmunks – 7
Tree squirrels - 5
Field mice – 3
Raccoons - 2

5. Explanation of the study:

The chipmunks, tree squirrels, field mice, and raccoons were used in a study designed to determine what birds and mammals can serve as a source of WNV for mosquitoes that feed on people and domestic animals. In this study, animals were exposed to WNV by intraperitoneal injection. Those that were susceptible to the virus would be expected to show clinical signs.

The plan for management of potential pain and distress was to euthanize (using a method approved by the AVMA Panel on Euthanasia) affected animals as soon as clinical signs were noted. However, we found that the disease progressed very quickly and the chipmunks, tree squirrels, field mice, and raccoons reported in category E were found dead before clinical signs were noted.

6. Justification for not using anesthetics and analgesics:

A search of literature (1965 through 2005), conducted in May, 2005, was used to determine that the use of analgesics could interfere with the study. Key words used included: virus infection and anesthetics, virus infection and analgesics, analgesics and liver detoxification, analgesics and flaviviruses, analgesics and Japanese encephalitis virus, analgesics and St. Louis virus, aspirin and virus infection, antipyretics and virus infection, aspirin and influenza virus.

Anesthetics and analgesics could not be used in this study because there is evidence that these drugs would impact the data collected and negate the studies by:

1) interfering with the development of viremia (Analgesics such as the oxicam group are antipyretic. Use of these drugs would interfere with the development of viremia, compromising the attempt to mimic that which occurs under natural conditions.)

2) enhancing the pathogenic effect of a virus infection (Sunden et al. J Vet Med Sci 2003:1185-8)

3) interfering with virus replication (Liao et al J. Virol 2001:7828-39)

(b)(6),(b)(7)(c)